

AMENDMENTS TO THE CLAIMS

Please amend the claims as set forth below in marked-up form.

1. (Currently amended) A method for ~~ablating a target object with a laser beam~~ performing at least one of an analysis on a state of a surface ablated by a corneal surgery apparatus which ablates a cornea by irradiating a laser beam, an analysis on inconsistency in the laser beam, and calibration on irradiation data of the laser beam, the method comprising:

a step of preparing a reference object for evaluation having a first curved surface shape being approximate to a curved surface shape of the cornea;

an ~~irradiation~~ ablation step of ~~irradiating a setting~~ irradiation conditions of the laser beam of the corneal surgery apparatus so that the first curved surface shape is changed into a second curved surface shape, and irradiating the laser beam onto the reference object having a first curved surface shape with the laser beam by the corneal surgery apparatus under laser the set irradiation conditions determined to form a second curved surface shape on the reference object, the first curved surface shape being approximate to a curved surface shape of the target object, to ablate the reference object;

a measurement step of measuring a third curved surface shape, ~~on the reference object~~ which has actually been formed on the reference object by the ~~laser irradiation~~ ablation, by a corneal shape measurement optical unit; and

an analysis step of ~~determining a discrepancy between the second curved surface shape and the third curved surface shape~~ analyzing that the third curved surface shape has been formed in an attempt to change the first curved surface shape into the second curved surface shape, and performing at least one of the analysis on the state of the ablated surface, the analysis on the inconsistency in the laser beam, and the calibration on the irradiation data of the laser beam.

2. (Canceled)

3. (Canceled)

4. (Currently amended) The ~~ablation~~ method according to claim 1, further comprising a display step of displaying a result of the analysis.

5. (Canceled)

6. (Currently amended) The ~~ablation~~ method according to claim 1, wherein the reference object has a known ablation rate relative to an ablation rate of the ~~target object~~ cornea.

7. (Canceled)

8. (Canceled)

9. (Canceled)